REMARKS

Claims 1, 4-6, 8, 10-14, 16, 18-21, 23 and 25-38 are now pending in the application. Claims 1, 6, 10, 19, 20, 21 and 23 are amended herein. New claims 31-38 are added herein. Support for new claims 31-38 can be found at least in paragraphs [0031] and [0032] of the present Application. Claims 2, 3, 7, 9, 15, 17, 22 and 24 are cancelled herein. No new matter is added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-4, 8-17, 19-21 and 23-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams (U.S. Pat. No. 5,183,105) in view of Reagen et al (U.S. Pat. No. 6,370,775). This rejection is respectfully traversed.

Claim 1 calls for "a plurality of openings in said sheet . . . each of said openings being canted relative to said width and height of said sheet, each of said openings being arranged on said sheet into a plurality of rows and into a plurality of columns with adjacent rows being generally equally spaced apart and with adjacent columns being generally equally spaced apart." Similarly, claim 10 calls for "at least one continuous fin . . . separated from a universal fin sheet having . . . a plurality of openings . . . each of said openings being arranged on said universal fin sheet into a plurality of rows and into a plurality of columns with adjacent rows being generally equally spaced apart and with adjacent columns being generally equally spaced apart." Also similarly, claim 20 calls for "separating said at least one continuous fin from a universal fin sheet having a width,

a height and a plurality of openings . . . each of said openings being arranged on said universal fin sheet into a plurality of rows and into a plurality of columns with adjacent rows being generally equally spaced apart and with adjacent columns being generally equally spaced apart."

In contrast, the Adams reference discloses an evaporator having fins with three columns of openings. The middle column consists entirely of a single opening that forms the lowermost row. This opening is not canted relative to the height or width of the fin. Accordingly, the Adams reference requires the fin to include a non-canted opening which, if cut from a fin sheet, would require the fin sheet to also have a non-canted opening. Having a non-canted opening is in direct contrast to the subject matter called for in claim 1. Additionally, the inclusion of this lowermost opening results in each of the columns not being equally spaced apart. Moreover, this lowermost row of a single opening also results in each of the rows not being equally spaced apart. This is in direct contrast to the subject matter called for in claims 1, 10 and 20. Thus, the evaporator of the Adams reference and the fins used thereon are structurally significantly different than that called for in the claims and do not lend themselves to being formed from a universal fin sheet as called for.

Additionally, the Reagen reference does not make up for the shortcomings in the Adams reference. Specifically, the Reagen reference teaches and discloses a fin sheet having a single column of openings that is cut to provide fins for use on a fin tube heat exchanger. A sheet with a single column of openings is in direct contrast to the universal fin sheet called for in the claims wherein there is a plurality of columns of openings in addition to a plurality of rows of openings. Furthermore, the rows of

openings in the fin sheet of Reagen are not equally spaced apart. Rather, as shown in Fig. 4 of the Reagen reference, the rows appear to be arranged into groups of three openings with the distance between adjacent openings in a group being less than a distance between adjacent openings in adjacent groups. Again, this is in direct contrast to the arrangement of the rows of openings in the universal fin sheet wherein the rows are equally spaced apart. Thus, it is respectfully submitted that the Reagen reference fails to teach, disclose or suggest a universal fin sheet as called for. Further, the Reagen reference also fails to disclose, teach or suggest the forming of continuous fins from said fin sheet on a tube requiring fins having more than a single column of openings.

Accordingly, it is respectfully submitted that neither the Adams nor Reagen references singularly or in combination teach, suggest or provide motivation to arrive at the subject matter called for in claims 1, 10 and 20. Accordingly, for at least these reasons, it is respectfully submitted that claims 1, 10 and 20 are non-obvious and patentable over the prior art of record. Claims 4, 8, 11-14 and 16 all depend from one of claims 1 and 10 and, therefore, for at least the same reasons stated above with reference to claims 1 and 10 are also non-obvious and patentable over the prior art of record. Accordingly, withdrawal of the instant rejection is requested.

Claim 19 calls for "separating at least one continuous fin . . . from a preformed universal fin sheet . . . having a plurality of columns and a plurality of rows of openings configured to allow a pair of tube passes to pass therethrough." The rejection of this claim relies upon the Reagen reference to teach the cutting of a fin from a fin sheet. The fin sheet of the Reagen reference, however, is limited to a single column of

openings even though the tube bundle includes a plurality of horizontal pairs of tube passes. A single column of openings is not the same as a plurality of columns of openings as called for in the universal fin sheet of claim 19. Additionally, the Reagen reference does not provide any motivation, teaching or suggestion to form a fin sheet having more than the single column shown. In fact, the Reagen reference teaches and discloses using a plurality of individual fin sheets each having a single column of openings to be arranged on a tube bundle having a plurality of horizontal pairs of tube passes. Thus, the teachings of the Reagen reference are in direct contrast to and teach away from that called for in claim 19 wherein a universal fin sheet having a plurality of columns and a plurality of rows are utilized to form individual fins having a desired number of rows and columns of openings. Thus, for at least this reason, it is respectfully submitted that claim 19 is non-obvious and patentable over the prior art of record. Claims 20, 21, 23 and 25-29 all depend from claim 19 and, therefore, for at least the same reasons stated above in regard to claim 19 are also non-obvious and patentable over the prior art of record. Accordingly, withdrawal of the instant rejection is requested.

Referring now to claims 8 and 16, both claims call for "said spacing between adjacent rows is generally equal to said spacing between adjacent columns." In contrast, the Adams reference, as stated above, discloses an intermediate column having a single lowermost row whose spacing results in the spacing between the columns and rows being non-uniform. Thus, the spacing between adjacent rows and between adjacent columns is not generally equal. Furthermore, even ignoring the intermediate column that forms the single lowermost row, the remaining openings do

not have the same spacing between the columns as exists between the rows. The Reagen reference fails to show or teach a fin having more than a single column. Thus, for at least these additional reasons, it is respectfully submitted that claims 8 and 16 are patentable and withdrawal of the instant rejection is requested.

Claims 5 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams (U.S. Pat. No. 5,183,105) in view of Reagen et al (U.S. Pat. No. 6,370,775) as applied to claims 1-4, 8-17, 19-21 and 23-29 and further in view of Murray (U.S. Pat. No. 5,853,259). Claims 6, 7, 18 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Adams (U.S. Pat. No. 5,183,105) in view of Reagen et al (U.S. Pat. No. 6,370,775) as applied to claims 1-4, 8-17, 19-21 and 23-29 and further in view of Smitte (U.S. Pat. No. 4,580,623). These rejections are respectfully traversed.

Claims 5, 6, 18 and 30 all depend from one of claims 1, 10 and 19. Therefore, for at least the same reasons stated above with reference to claims 1, 10 and 19 are also patentable over the prior art of record. Additionally, claims 7 and 22 are cancelled herein. Thus, withdrawal of the instant rejection is requested.

New Claims

Claim 31 is added herein and depends from claim 20. Therefore, for the same reasons stated above with reference to claim 20 and claim 19, is also patentable over the prior art of record. Thus, allowance of claim 31 is requested.

Claims 32-38 are added herein. It is respectfully submitted that the subject matter of these claims is not disclosed, taught or suggested in the prior art of record. Thus, allowance of these claims is requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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